

**Metal Carbide Air Bearing Surface Layer on a
Silicon Read/Write Head Element**

Abstract

Embodiments include a slider having a silicon body and at least one carbide pad structure embedded therein. At least one head structure for reading and/or writing data is located on the silicon body. The silicon body includes an air bearing surface on which the head is located. The air bearing surface also includes at least a portion of the carbide pad structure thereon. In one aspect, the metal carbide structure may be made from a material such as titanium carbide, zirconium carbide, vanadium carbide, tungsten carbide, or molybdenum carbide. In another aspect, the head may be located on the air bearing surface between carbide pad structures.